

CLAIMS

1. A stator for a flotation cell to be used in the flotation of slurry-like material, such as ore and concentrate containing valuable minerals, by means of which
5 stator the orientation of the slurry flow created by the flotation cell rotor can be controlled, **characterized** in that the stator (41) is composed of at least three structural elements (1, 11, 21, 42) to be installed around the rotor (47), provided with at least one flow regulator (2; 12, 13; 22, 23, 24; 44, 45, 46).
- 10 2. A stator for a flotation cell according claim 1, **characterized** in that at the other end of the flow regulator (2; 12, 13; 22, 23, 24; 44, 45, 46) of the structural element, there is connected a supporting structure (3, 14, 25, 43) whereby the structural element (1, 11, 21, 42) can be connected to the flotation cell or to the fastening structure of the stator (41) arranged in the flotation cell.
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3. A stator for a flotation cell according claim 1 or 2, **characterized** in that the structural element (11, 21, 42) includes at least two flow regulators (12, 13; 22, 23, 24; 44, 45, 46) that are interconnected by means of a supporting structure (14, 25, 43) attached at the other end of the flow regulator of the structural
20 element.
4. A stator for a flotation cell according any of the preceding claims, **characterized** in that the flow regulators (12, 13; 22, 23, 24; 44, 45, 46) provided in one and the same structural element (3, 14, 25, 43) are essentially
25 identical in cross-section.
5. A stator for a flotation cell according any of the preceding claims 1 – 3, **characterized** in that the flow regulators (12, 13; 22, 23, 24; 44, 45, 46) provided in one and the same structural element (3, 14, 25, 43) are at least
30 partly different in cross-section.

6. A stator for a flotation cell according any of the preceding claims, **characterized** in that at that end of the flow regulators provided in the structural element (3, 14, 25, 43) that is opposite to the supporting structure (14, 25, 43), there is installed a connecting element (15) for interconnecting the flow
5 regulators (12, 13; 22, 23, 24; 44, 45, 46) arranged in the structural element (3, 14, 25, 43).

7. A stator for a flotation cell according any of the preceding claims, **characterized** in that the structural elements (3, 14, 25, 43) of the stator can be
10 installed around the rotor (47), so that those edges of the flow regulators (2; 12, 13; 22, 23, 24; 44, 45, 46) provided in the structural elements (3, 14, 25, 43) that are located nearest to the rotation axis (48) are placed at an essentially equal distance from the rotor rotation axis.

15 8. A stator for a flotation cell according any of the preceding claims, **characterized** in that the stator (41) is composed of structural elements installed on two different levels around the rotor (47).

9. A stator for a flotation cell according any of the preceding claims,
20 **characterized** in that the structural element (21) of the stator is manufactured by casting in one single piece.

10. A stator for a flotation cell according any of the preceding claims 1 – 8, **characterized** in that the flow regulator (2; 12, 13; 22, 23, 24; 44, 45, 46) of the
25 structural element of the stator and the supporting structure (3, 14, 25, 43) to be connected to the flow regulator, as well as the connecting element (15) arranged between the flow regulators, are manufactured separately by casting.

11. A stator for a flotation cell according claim 10, **characterized** in that the
30 flow regulator (2; 12, 13; 22, 23, 24; 44, 45, 46) of the structural element of the stator and the supporting structure (3, 14, 25, 43) to be connected to the flow regulator are interconnected by welding.

12. A stator for a flotation cell according claim 10, **characterized** in that the flow regulator (2; 12, 13; 22, 23, 24; 44, 45, 46) of the structural element of the stator and the supporting structure (3, 14, 25, 43) to be connected to the flow
5 regulator, as well as the connecting element (15) provided in between the regulators, are interconnected by welding.

13. A stator for a flotation cell according any of the preceding claims, **characterized** in that the structural elements (3, 14, 25, 43) of the stator can be
10 installed around the rotor (47), so that the tangential slurry jet emitted from the rotor (47) of the flotation cell can be directed towards at least one stator flow regulator (2; 12, 13; 22, 23, 24; 44, 45, 46) in order to prevent the slurry jet from flowing directly through the stator.